

REMARKS:

In the foregoing amendments, claims 1, 3-6, 11, 12, and 20 were amended, and claim 19 was canceled. Claim 11 was rewritten as an independent claim. Claims 1, 3-6, 12, and 20 were amended to better define applicant's invention. For example, amended claim 1 defines that the plurality of chambers are "arranged in series," such as shown in figure 4 of the present application. Claims 3, 4, and 6 were amended to define that the inlet pressure of the emulsifying means is between 5 Mpa and 15 Mpa, which is shown in figure 7 and discussed in applicant's specification disclosure. Claims 5, 12, and 20 were amended to include additional structure. Editorial changes were made to other claims. For example, claim 6 was amended by removing the "." in the middle thereof, as suggested in the outstanding Office action. Accordingly, applicant respectfully request that the examiner reconsider and withdraw the objection to claim 6 that was set forth in the outstanding Office action. After the foregoing amendments, claims 1-18 and 20 are in the application for consideration at this time.

In the outstanding Office action, claims 11 and 19 were not rejected over prior art. The Official action objected to these claims as containing allowable subject matter, and stated that these claims would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. In the foregoing amendments, claim 11 was rewritten as in

independent claim including all the limitations of original claim 1 from which it depended. For these reasons, a formal allowance of claim 11 is respectfully requested.

The Official action set forth a rejection of claims 1, 3, 5, 10, and 12 under 35 U.S.C. § 102(b) as being unpatentable over U.S. patent No. 4,533,254 of Cook *et al.* (Cook). This rejection is set forth on pages 2 and 3 of the Official action. Claims 2, 4, 6, 7-9, 13-18, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook. This rejection is set forth on pages 3 and 4 of the Official action.

Applicant respectfully submits that the presently claimed invention is patently distinguishable from the teachings of Cook within the meaning of 35 U.S.C. § 102 or 35 U.S.C. § 103(a) for at least the following reasons.

Applicant's claims define an emulsion producing apparatus comprising, *inter alia*, a plurality of chambers that are arranged in series. Attention is respectfully directed to figure 5 of Cook, which shows a cross section of the jet interaction chamber block 1. In the jet interaction chamber block 1 proposed by Cook, liquid mixture under pressure passes through the inlet passage 53 through the nozzle and then out discharge passage 54. In-line grooves 50, 51, and 61 are part of the nozzle. The in-line groove 50 is shown in figure 2. A slot 76 (see figure 3 of Cook) is arranged in shim 44 between the in-line grooves 50, 51, and 61. Even if the in-line grooves 50, 51, and 61 were considered

chambers, which applicant respectfully submits is not a proper interpretation of Cook, these grooves are arranged parallel to each other and not in series as shown for the chambers in figure 4 of the present application. For these reasons, applicant respectfully submits that it is impossible for the teachings of Cook to contemplate or suggest the invention as set forth in present claim 1, which require that the plurality of chambers are "arranged in series."

Present claims 2, 4, and 6 define, *inter alia*, that an equivalent circle of the small hole of the partition wall falls in a range of 0.5 mm through 2 mm. The Official action stated that this limitation is obvious from the teachings of Cook, citing column 8, lines 3-24, of Cook. This portion of Cook proposes a nozzle height H_N of at least 10 μm (0.01mm) which is 20 times smaller than the lower limit of 0.5 mm as required in the present claims. Viewing figure 9 of Cook, it appears that the width of the nozzle W_N is greater than its height. However, this combination of measurements does not suggest a range of 0.5 mm through 2 mm, as required in the present claims. In addition, it is respectfully noted that the teachings of Cook require an extremely higher pressure, when compared to applicant's claims, as discussed in the next paragraph. Increasing the size of the nozzle in Cook will diminish the pressure required therein. For these reasons, applicant respectfully submits that one of ordinary skill in the art would not be motivated to modify the nozzle proposed by Cook by increasing its size, so that it could contemplate or suggest the small

hole of the partition wall in applicant's claims that falls in a range of 0.5 mm through 2 mm. Therefore, applicant respectfully submits that claims 2, 4, and 6 are patently distinguishable from the teachings of Cook.

Present claims 3, 4, and 6 define, *inter alia*, that the delivery pressure of the pressure rising pump falls in a range of 5 Mpa through 15 Mpa. The Official action stated that this limitation is obvious from the teachings of Cook, citing column 8, lines 30-31, of Cook. However, this portion of Cook discloses that the pressure fed into the block is between about 4000 and 10,000 psi, which is equivalent to about 27.58 Mpa and 68.95 Mpa. Thus, the pressure proposed by Cook is vastly in excess of that required in applicant's claims 3, 4, and 6, which require that the delivery pressure of the pressure rising pump provided at an inlet of the emulsifying means falls in a range of 5 MPa through 15 MPa. The importance of the presently claimed pressure is shown in figure 7 and discussed in the accompanying disclosure of the present application. For these reasons, applicant respectfully submits that this aspect of the presently claimed invention cannot be anticipated by or obvious from the teachings of Cook.

With respect to claims 5, 12, and 20, the Official action stated that the limitations in these claims only regard the manner in which the apparatus is intended to be used and do not further limit claim structure. In the foregoing amendments, claims 5, 12, and 20 were amended to set forth additional

structures of the presently claimed emulsion producing apparatus. Applicant respectfully submits that the teachings of Cook do not contemplate or suggest the structures set forth in claims 5, 12, and 20, either alone or in combination with the structures set forth in the claims from which these claims depend.

In accordance with the foregoing amendments and remarks, applicant respectfully submits that the presently claimed invention is patently distinguishable from the teachings of Cook within the meaning of 35 U.S.C. § 102 or 35 U.S.C. § 103. Therefore, applicant respectfully requests that the examiner reconsider and withdraw the rejections set forth in the outstanding Office action of applicant's claims over these teachings.

Based on the above, a formal allowance of claims 1-18 and 20 is respectfully requested. While it is believed that all the claims in this application are in condition for allowance, should the examiner have any comments or questions, it is respectfully requested that the undersigned be telephoned at the below listed number to resolve any outstanding issues.

In the event this paper is not timely filed, applicant hereby petitions for an appropriate extension of time. The fee therefor, as well as any other fees which become due, may be charged to our deposit account No. 22-0256.

Respectfully submitted,
VARNDELL & VARNDELL, PLLC

A handwritten signature in black ink, appearing to read "R. Eugene Varndell, Jr.", is written over a horizontal line.

R. Eugene Varndell, Jr.
Attorney for Applicants
Registration No. 29,728

Atty. Case No. VX012384
106-A S. Columbus St.
Alexandria, VA 22314
(703) 683-9730

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